

Abstract

The method enables the series production of light structural components out of long-fibre thermoplastic material (LFT) with integrated continuous fibre (EF) - reinforcements in a single stage LFT - pressing step. In this, EF - tapes (5) are melted open and transferred into a profile tool (21) of an EF - profile forming station (20), there are pressed for a short time period and shaped into the required EF - profile (10). In doing so, by means of contact with the thermally conditioned profile tool (21) on the profile surface (11) a shock-cooled, dimensionally stable, thin casing layer (12) is formed and the inside of the EF - profile remains melted. Following a defined short shock-cooling period (t_s), the EF - profile (10) is transferred into an LFT - tool (31) and pressed together with an introduced molten LFT - mass (6). In doing so, the casing layer (12) is melted open again on the surface (11) and is thermoplastically bonded together with the surrounding LFT - mass.

(Fig. 1)